

Appl. No. 09/978,382
Amdt. dated January 29, 2004
Reply to Office Action of October 29, 2003

PATENT

Amendments to the Drawings:

The attached sheet of drawings re-numbers Figure 9 as "Figure 8." This sheet, replaces the original sheet including Figure 9.

Attachment: Replacement Sheet

REMARKS/ARGUMENTS

1. *Status of the claims*

Claims 24-26, 28-29, 31-33, 35, 41-43, 45-47 and 65-71 are currently pending with entry of the Amendment. Claims 26, 28, 43 and 45 are amended. No new matter is added.

2. *Drawings*

The Examiner objected to the request in the previous amendment to re-number Figure 9 as Figure 8. Accompanying this Amendment, Applicants have provided a revised Figure 8 as suggested by the Examiner. Accordingly, Applicants respectfully request withdrawal of the objection.

3. *Rejection under 35 U.S.C. § 112, first paragraph*

Claims 24-47 and 65-71 were rejected under 35 U.S.C. § 112, first paragraph as allegedly not complying with the enablement requirement. The Examiner argued that while the claims were enabled for increasing lignification in the valve mesophyll of plants, other tissues were not enabled because there was no evidence provided for such an effect in the examples of the application. The Examiner suggested that Applicants submit a declaration showing that other plant parts display enhanced lignification upon expression of AGL1 or AGL5.

A Declaration of Martin F. Yanofsky, Ph.D. under 37 C.F.R. § 1.132 (Exhibit A) accompanies this Amendment. The declaration explains that a 35S::IND1 construct was introduced into Arabidopsis plants and assayed for lignification. The inflorescence stem of wild-type plants was inspected for lignification using a lignin-specific phloroglucinol stain of a stem section. The results are shown in the figure attached to the Declaration. Wild-type plants reveals the normal pattern of stem lignification in the tracheary elements while a similar stem section from 35S::IND1 plant stems reveals ectopic lignification. The two images in the figure were taken under the same magnification. This data shows that the 35S::IND1 plants are more extensively lignified than are wild-type plants, indicating that the ectopic expression of IND1 in the stem is sufficient to promote ectopic lignification of cells from the stem.

AGL1 and AGL5 are required to activate IND1 gene expression. *See, e.g.,* Figure 4 of Liljegren *et al.*, *Nature* 404:766-770 (2000) (Exhibit B), demonstrating that endogenous IND1 expression does not occur unless AGL1 (referred to as SHP1) and AGL5 (referred to as SHP2) are present. Thus, ectopic expression of AGL1 and AGL5 would subsequently result in ectopic IND1 expression. Therefore, the IND1 results discussed above indicates that ectopic AGL1 or AGL5 expression would result in ectopic expression of IND1, which in turn would result in ectopic lignification in cells from the stem as well as the enhanced valve mesophyll lignification described in the examples of the specification.

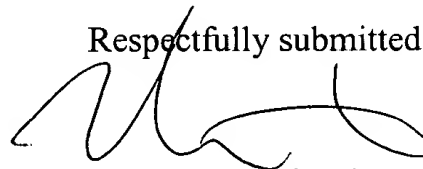
In view of the additional data described above, Applicants assert that the claims are enabled for their full scope. Accordingly, Applicants respectfully request withdrawal of the rejection.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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Attachments
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